SURREY NOW-LEADER

# ANALYSIS: Why are B.C. kids sick all the time? Health experts explain

Dr. Lyne Filiatrault, Arijit Chakravarty, T. Ryan Gregory
a day ago

*Why are the kids sick all the time? Three experts examine the fallout from COVID-19 and the 'parade of viruses' affecting children in B.C., Canada and beyond. | Adobe stock photo*

"*I'm sick and tired of being sick and tired. It's been a rotating door here of sickness. Someone is always sick. Since September, and I don't even know if blaming schools and daycare is the reason. I need family immunity help. Any tips?*" – shared by a mom on social media, December 2024

For many B.C. families, this has been a challenging fall.

B.C. schools restarted during a summer surge of COVID-19, and since then, it's been a neverending

parade of viruses infecting schoolchildren and their families. In the lead-up to the holidays, B.C.'s pediatric laboratory RSV test positivity rate was hitting last year's high of 30 per cent. Meanwhile the pediatric RSV admissions were outpacing last year's, as per the latest report of the Canadian Nosocomial Infection Surveillance Program. At the same time, influenza infections were ramping up.

For parents, this may feel like déjà vu, stirring up memories of the fall of 2022. Recall the tripledemic of RSV, influenza, and COVID-19 when pharmacies ran out of kids' Tylenol, children's hospitals ran out of ICU beds, and Children's Hospital of Eastern Ontario called in the Red Cross to help.

**The 'immunity debt' narrative**

In the fall of 2022, parents were told to blame "immunity debt" for the surge in children and youths' respiratory infections. Immunity "debt" or "gap" was proposed to result from the lack of immune stimulation due to the reduced circulation of microbial agents and reduced vaccine uptake during the early years of the pandemic.

As Dr. Henry, B.C provincial health officer, explained back then: *"The flu season… hit young people early and hard this year [2022-2023], likely due to their lack of immunity after two years of COVID-19 prevention protocols." (January 13 2023, Globe and Mail)*

But is this really what's going on? Many scientists didn't buy it then, and don't buy it now. Some have pointed out that increased levels of infectious disease have persisted after several years without widespread mitigations -- and kids who weren't even born yet during lockdowns bear much of the brunt of current infections.

Dr. Satoshi Akima, an Australian Internal Medicine specialist, bluntly stated then, "the "immunity debt" propaganda … means that if there is a surfeit of infection, this can only have resulted from there previously having been insufficient infections. The solution to excess infections is always more infections."

Ironically, the authors of the original "immunity debt" article never suggested more infections as a way to fill the gap/debt but rather pushed for the "implementation of reinforced catch-up vaccination programs" with a broadening out of the vaccines being offered. As for diseases without an available vaccine, they recommended that "rapid screening, timely re-enforcement of hygiene measures, and adaptation of health-care systems should be implemented."

Unfortunately, these exhortations were ignored, and the "immunity debt" concept was distorted to become synonymous with a weak immune system from too few infections.

On Oct. 22, 2024, at her last update on B.C.'s respiratory illness season, Dr. Henry stated as much: "*If*

*you've had COVID recently, you've had a boost to your immunity, so that's a good thing*."

If indeed "immunity debt" is the result of too few infections, and lasts for years, would it follow that not only airborne but other mitigations should be avoided? Should kids drink untreated water, consume unpasteurized milk, and stop washing their hands? This might seem like a good way to strengthen children's immune systems -- were it not for the fact that we know what happens without hygiene: prior to 1850, before these advances in science and sanitation, roughly 50% of children died before their 15th birthday.

"Immunity debt" provided a simple, easy-to-grasp explanation that was repeated over and over by media, scientists and physicians alike, until it took hold in the population. This is how dis/misinformation spreads. Anyone who pointed out that's not how the immune system works was drowned out by this loud chorus. To this day, the purely made up and misleading concept of "immunity debt" stubbornly endures.

**Infections do not build a stronger immune system**

There is no lasting immunity to RSV – if you get infected one year, it does not mean you avoid it the next. In 2021, the RSV season returned to many countries, these same countries were hit hard again by RSV in 2022, and some of the children infected in the first year were sick again with RSV the next.

With influenza, the virus in circulation this year is not the same as last year; that is why the influenza vaccine gets updated every year to try and match the strains *de l'année*. In fact with influenza, you might get infected with influenza A in the fall, only to get infected again later in the spring with influenza B.

And then there's SARS-CoV-2. Everyone knows by now, there is no "one infection and you're done," nor any possibility of "vax and relax." Au contraire, you can get infected over and over with SARS-CoV-2. Neither infection nor vaccination provide lasting immunity against SARS-CoV-2 infection.

In the absence of public health measures to limit transmission, repeated waves of infection will continually surge through the population, driven by the evolution of new variants and the waning population immunity from infection and vaccines. If you are lucky, your most recent vaccine will offer you some protection against being infected, but this protection varies from one person to the next and lasts only for a few months.

Don't get us wrong, the vaccines are very important, but their main benefit at this point is to decrease the risk of ending up in hospital, in the ICU, or dying. They also diminish, but don't eliminate, the longer term risks to your health, which are also severe outcomes, as anyone who has developed Long COVID will tell you. These long-term effects are shockingly common, and rising as our population

gets reinfected over and over, as both the STAT Canada and Institut National de Santé Publique du Québec reports showed.

## If there is no 'immunity debt,' then what is going on? Why is everyone sick all the time?

One of us (T. Ryan Gregory) coined the term "immunity theft" to describe the negative impact of SARS-CoV-2 on the immune system.

More and more evidence is accumulating that the virus damages our immune system, making us more vulnerable to future infections. Crucially, T cells, a class of white blood cells in our body that play a vital role in our body's defence against other infectious diseases, are depleted and exhausted, even with mild COVID-19 infections. Some of this effect seems to come from the SARS-CoV-2 virus directly infecting these cells.

Simply put, COVID-19 infections weaken our immune systems. This makes us more prone to reinfection with SARS-CoV-2, infections with other viruses (e.g. RSV), reactivation of dormant viral infections (e.g. shingles, Herpes-Zoster virus), bacterial infections (Group A strep,TB) and even rare fungal infections. To make matters worse, the infections themselves may also be more severe. Being infected with SARS-CoV-2 and other viruses or bacteria at the same time can also make things worse, in adults as well as children.

It is clearer now that the precautionary principle should have been applied by B.C. public health back in January 2022. Instead, B.C. schools reopened without any additional airborne mitigations despite the arrival of the more highly contagious Omicron variant.

As German Health Minister Karl Lauterbach stated in 2022, "It is incompatible with my job as health minister that children are falling ill in large numbers. Infecting an entire generation is irresponsible."

In B.C., across Canada, and around the world, children are being repeatedly infected and the consequences are now coming into focus, at least for their parents: children sick all the time, absent from school, with some struggling with Long Covid, both the debilitating post-viral syndrome and newly acquired health conditions.

With some political will, our leaders could put in place solutions tomorrow to make the air in daycares, schools, and on school buses safe to share. These solutions would serve us well when forest fires return and if (when) another pandemic hits.

Instead, our political leaders are choosing not to act.

As we all know, to fix a problem, you must first admit there is a problem. Admitting there is a problem becomes harder when public health has been complicit in creating the problem: the track record of falsehoods is a long one when it comes to this virus. First it was “children don’t get COVID” and “schools are safe." Then, it became “children aren’t harmed by COVID," “vaccines will protect you from infection” and “it’s just a cold."

These false reassurances – inconsistent with the science at the time – have quietly faded away as reality set in. Repeated infections with COVID, and the risk of Long COVID are on the table for everyone in the population, even children. Every COVID infection brings with it a risk of Long COVID that doesn’t decrease, and COVID harms children’s immune systems too.

For parents asking about “family immunity tips,” here they are: Redouble your efforts to protect your children from COVID-19 and respiratory infections; they are making your children sicker, not stronger. All the tools in the tool box should be used, as each one on its own is imperfect, but used together they are stronger: respirators, vaccines, rapid antigen tests, if possible staying home when sick, learning how to clean the indoor air at home and advocating for clean air in your children’s daycares and schools.

Hopefully in 2025, our leaders will realize that the societal, and economic costs of not providing clean air in daycares, schools and school buses are too great for them not to act.

Our children’s health depends on it.

***Arijit Chakravarty, T. Ryan Gregory, Dr. Lyne Filiatrault***

**Arijit Chakravarty** *is the CEO of Fractal Therapeutics, which focuses on applying mathematical modeling to drug discovery and development. Over the past four years, he has led an interdisciplinary team of volunteers in publishing twenty peer-reviewed papers on COVID-19. Their work has focused on examining the public health response from a risk mitigation standpoint and proposing (therapeutic and non-pharmaceutical) strategies for combating the disease. Find him on X.*

***T. Ryan Gregory*** *is a professor of evolutionary biology at the University of Guelph. His research interests include genome size and junk DNA, biodiversity, evolutionary theory, evolution education, philosophy of biology, and scientific communication. Since 2020, he has had a strong interest in the evolution of viral variants, and has used his platform on social media to share information about the evolution of SARS-CoV-2. He has been the recipient of research awards from the Natural Sciences and Engineering Research Council of Canada, the American Society of Naturalists, the Canadian Society of Zoologists, and the Genetics Society of Canada, as well as a teaching award from the*

*University of Guelph. From 2018-2022 he was Chair of the Department of Integrative Biology and from 2014-2021 he was Editor-in-Chief of the journal Evolution: Education and Outreach. Find him on X.*

***Dr. Lyne Filiatrault** is a retired emergency physician who spent most of her 25-year career at Vancouver General Hospital. For 15+ years, she served as VGH Emergency Department Quality Improvement director. On March 7, 2003 she was on duty when Vancouver's index case of SARS presented to the emergency department. Her team followed the precautionary principle, and isolated the patient. In 2021, she joined Protect Our Province BC where she was an active, and outspoken member for close to 3 years. She is now a member of the Canadian Aerosol Transmission Coalition and continues to advocate for preventing the acute and longer term harms of SARS-CoV-2 infections.*

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